

Chignik Lagoon Sockeye Salmon Test Fishery Operational Plan, 2014

by

Todd J. Anderson

April 2014

Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the following reports by the Divisions of Sport Fish and of Commercial Fisheries: Fishery Manuscripts, Fishery Data Series Reports, Fishery Management Reports, and Special Publications. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metric)		General		Mathematics, statistics		
centimeter	cm	Alaska Administrative Code	AAC	all standard mathematical signs, symbols and abbreviations		
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	H _A	
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	<i>e</i>	
hectare	ha			catch per unit effort	CPUE	
kilogram	kg	at	@	coefficient of variation	CV	
kilometer	km			common test statistics	(F, t, χ^2 , etc.)	
liter	L	compass directions:		confidence interval	CI	
meter	m	east	E	correlation coefficient (multiple)	R	
milliliter	mL	north	N	correlation coefficient (simple)	r	
millimeter	mm	south	S	covariance	cov	
Weights and measures (English)		west	W	degree (angular)	°	
	cubic feet per second	ft³/s	copyright	©	degrees of freedom	df
	foot	ft	corporate suffixes:		expected value	<i>E</i>
	gallon	gal	Company	Co.	greater than	>
	inch	in	Corporation	Corp.	greater than or equal to	≥
	mile	mi	Incorporated	Inc.	harvest per unit effort	HPUE
	nautical mile	nmi	Limited	Ltd.	less than	<
	ounce	oz	District of Columbia	D.C.	less than or equal to	≤
	pound	lb	et alii (and others)	et al.	logarithm (natural)	ln
	quart	qt	et cetera (and so forth)	etc.	logarithm (base 10)	log
yard	yd	exempli gratia (for example)	e.g.	logarithm (specify base)	log ₂ , etc.	
Time and temperature		et cetera (and so forth)		minute (angular)	'	
	day	d	id est (that is)	i.e.	not significant	NS
	degrees Celsius	°C	latitude or longitude	lat. or long.	null hypothesis	H ₀
	degrees Fahrenheit	°F	monetary symbols (U.S.)	\$, ¢	percent	%
	degrees kelvin	K	months (tables and figures): first three		probability	P
	hour	h	letters	Jan,...,Dec	probability of a type I error (rejection of the null hypothesis when true)	α
	minute	min	registered trademark	®	probability of a type II error (acceptance of the null hypothesis when false)	β
	second	s	trademark	™	second (angular)	"
	Physics and chemistry		United States (adjective)	U.S.	standard deviation	SD
		all atomic symbols		United States of America (noun)	USA	standard error
alternating current		AC	U.S.C.		variance	
ampere		A	U.S. state	use two-letter abbreviations (e.g., AK, WA)	population sample	Var var
calorie		cal				
direct current		DC				
hertz		Hz				
horsepower		hp				
hydrogen ion activity (negative log of)		pH				
parts per million		ppm				
parts per thousand	ppt, ‰					
volts	V					
watts	W					

REGIONAL OPERATIONAL PLAN CF.4K.2014.18

**CHIGNIK LAGOON SOCKEYE SALMON TEST FISHERY
OPERATIONAL PLAN, 2014**

by

Todd J. Anderson

Alaska Department of Fish and Game, Division of Commercial Fisheries, Kodiak

Alaska Department of Fish and Game
Division of Commercial Fisheries

April 2014

The Regional Operational Plan Series was established in 2012 to archive and provide public access to operational plans for fisheries projects of the Divisions of Commercial Fisheries and Sport Fish, as per joint-divisional Operational Planning Policy. Documents in this series are planning documents that may contain raw data, preliminary data analyses and results, and describe operational aspects of fisheries projects that may not actually be implemented. All documents in this series are subject to a technical review process and receive varying degrees of regional, divisional, and biometric approval, but do not generally receive editorial review. Results from the implementation of the operational plan described in this series may be subsequently finalized and published in a different department reporting series or in the formal literature. Please contact the author if you have any questions regarding the information provided in this plan. Regional Operational Plans are available on the Internet at: <http://www.adfg.alaska.gov/sf/publications/>

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This document should be cited as:

Anderson, T. J. 2014. Chignik Lagoon sockeye salmon test fishery operational plan, 2014. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Operational Plan ROP.CF.4K.2014.18, Kodiak.

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SIGNATURE/TITLE PAGE

Project Title: Chignik Lagoon Sockeye Salmon Test Fishery Operational Plan

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Division, Region and Area: Division of Commercial Fisheries, Region IV, Kodiak

Project Nomenclature:

Period Covered: 2014

Field Dates: June 1, 2014–September 15, 2014

Plan Type: Category I

Approval

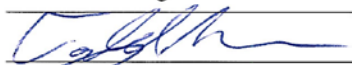
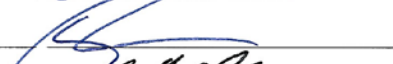

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ABSTRACT

The Alaska Department of Fish and Game (AGF&G) annually conducts test fisheries in Chignik Lagoon primarily to determine the relative abundance of Chignik River-bound sockeye salmon *Oncorhynchus nerka* prior to the first commercial salmon fishery in the Chignik Management Area (CMA). To conduct test fisheries, the department charts interested local fishing vessels from the CMA and follows established test fishing protocols. This report documents the purpose of test fishing in Chignik Lagoon and summarizes the specific procedures for the Chignik test fishery program.

Key words: Chignik Management Area, CMA, Chignik Lagoon, test fishery, sockeye salmon, salmon management, *Oncorhynchus nerka*

INTRODUCTION

Commercial salmon fishing periods in the Chignik Management Area (CMA) are primarily based on achieving Chignik River sockeye salmon *Oncorhynchus nerka* escapement objectives throughout the season. Sockeye salmon return to the Chignik River in two distinct, but overlapping runs; the early run returns primarily to Black Lake during June, and the late run returns primarily to Chignik Lake during July and August.

To ensure the escapement objectives for both runs are achieved, the Alaska Department of Fish and Game (ADF&G) uses the Chignik River weir to enumerate escapement in addition to assessing run strength using commercial catch data. When catch data are not available due to commercial fishery closures, test fisheries are conducted to evaluate inseason run strength in the Chignik Lagoon.

Under current regulation, 5 AAC 15.357 (b)(1), the CMA may open to commercial salmon fishing when there is an expectation that 20,000 sockeye salmon will escape into the Chignik River. Based on this regulation, the department conducts a test fishery in Chignik Lagoon during early June to assess the early-season run strength of the sockeye salmon returning to the Chignik River.

GOALS

The CMA test fishery program has the following goals:

- 1) Obtain relative abundance estimates of sockeye salmon in Chignik Lagoon, and
- 2) Provide partial funding for the management of the Chignik Management Area salmon fishery.

2014 TEST FISHERY

ESTABLISHMENT OF CHARTER VESSEL SELECTION LIST

To conduct salmon test fisheries in the Chignik Management Area, the department charts local commercial fishing vessels. A list of vessel operators interested in participating in the program will be established prior to all test fisheries. The initial enrollment period will open on approximately May 15 and will close just before the first test fishing date. Interested vessel operators can enroll by calling the Chignik weir at (907)845-2243 during this period. At the close of this initial enrollment period, the department will perform a random drawing to determine the sequence of the participating vessel operators. This sequential list will be maintained throughout the season. Additional vessel operators may enroll after the initial enrollment and drawing; however, these operators will be placed at the end of the established list in the order they are

received. If a vessel operator is unable to participate when their opportunity arises, the department will contact the next vessel operator on the established list. The vessel operator that was unable to participate will be reassigned to the bottom of the established list.

REQUIREMENTS FOR CHARTER CONTRACT

Fishermen wishing to participate in the department's test fishing program must agree to the terms of the department's short-term vessel charter agreement (Appendix A1) and meet the following minimum requirements: Vessel operators must have a minimum of three years commercial fishing experience within Chignik Lagoon. All vessels must contain a refrigerated seawater (RSW) system to chill the catch. Legal Chignik Lagoon seine gear is required, as is vessel compliance with U.S. Coast Guard safety regulations and insurance requirements.

A Chignik Commercial Fisheries Entry Commission (CFEC) permit is not required as the department is chartering the vessel and operating under the department's test fishing permit. An ADF&G observer will be onboard the test fishing vessel for the duration of the charter. Prior to test fishing, vessel operators are required to complete the *State of Alaska Short-Term Vessel Charter Agreement* (Appendix A1). Test fishing vessel operators will be paid \$1,800 per day to cover the boat, crew, fuel, lubricants, gear, and transportation of the catch to the appropriate processor.

TEST FISHING SCHEDULING

The department will schedule the time and date of the 2014 sockeye salmon test fishery based upon inseason data and funding requirements. The first test fishery is expected to take place on or about June 8. Subsequent test fishing may be necessary during times when harvest data are not available due to extended closures or low fishing effort.

SEINING PROCEDURES

Department policy requires notification of the U.S. Coast Guard (USCG) prior to beginning test fishing activities. Chignik weir staff will contact Dave Mitchell by phone (907-465-4131) or e-mail (dave.mitchell@alaska.gov) to provide the name of the fishing vessel, the duration, and location of the charter. This information will then be provided to the USCG.

The set locations for the test fishery are distributed throughout Chignik Lagoon (Figure 1). Typically, the first set is made at Mensis Point (1) and the last set is made at Ocean Beach (8). The alternative site location (Figure 1) will be fished when it is determined by the vessel operator and department observer that seas are too rough to fish the Ocean Beach site. Department staff will meet the charter vessel near the location of the first set on a morning flood tide. The first set will be made as soon as the vessel operator determines there is enough water to make the set. The seine will be fished for 10 minutes, as measured from the time the skiff begins pulling the net off the deck of the fishing vessel to the time the skiff returns the net back to the vessel. The skipper and the biologist will estimate the number of sockeye salmon caught. The biologist will record the estimate of catch at each location on the *Chignik Lagoon Test Fishery Data Form* (Figure 2).

Upon completion of the final set, the vessel will transport the catch to a processor. All fish are sold using the department's test fish permit card, and the revenue will be deposited into the Chignik Test Fish Account.

DATA ANALYSIS

Chignik management biologists use information collected from the test fishery in conjunction with escapement data to estimate sockeye salmon abundance. The following factors are considered when estimating abundance: 1) environmental and tidal conditions, 2) observed sockeye salmon activity, 3) abundance estimate from the vessel skipper and onboard biologist, and 4) test fishery catches and escapement estimates from previous years.

The department will distribute the results of test fishing activities with a news release at the end of each test fishery and during regularly scheduled radio updates.

FIGURES

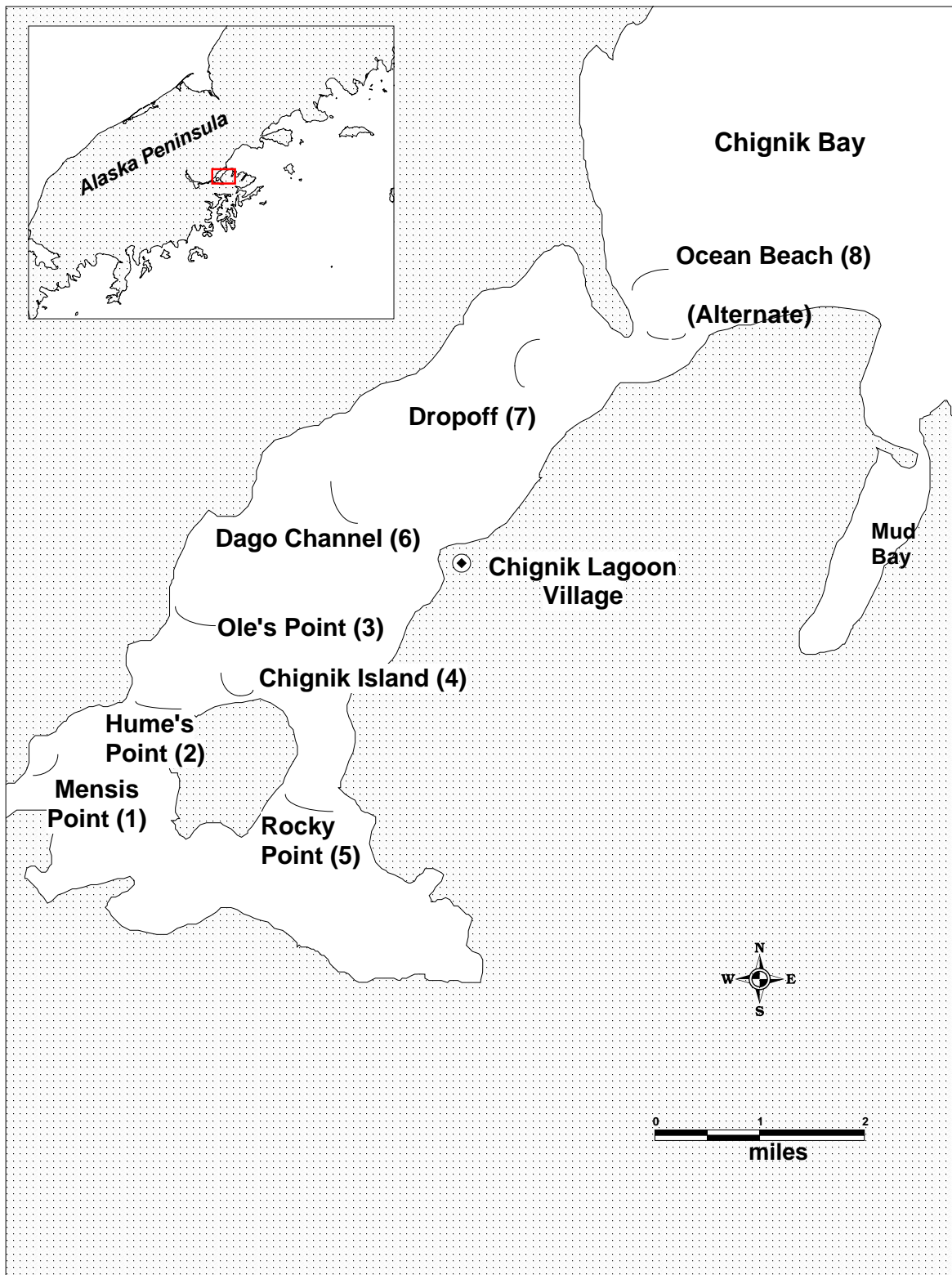


Figure 1.–Chignik Lagoon test fishing locations.

Chignik Lagoon Test Fishery Data Form

Date_____

Kodiak High Tide

Vessel_____

Time_____

Observer_____

Height_____

Processor_____

SET _____

Lat. _____

Long. _____

Wind dir/vel _____

H2O Temp _____

Cloud Cover _____

Time Out _____

Time Closed _____

Catch

	Caught	Sold
Sockeye		
Chinook		
Pink		
Chum		
Coho		
Total		

Bycatch

	Caught	Sold
Total		

Comments:

SET _____

Lat. _____

Long. _____

Wind dir/vel _____

H2O Temp _____

Cloud Cover _____

Time Out _____

Time Closed _____

Catch

	Caught	Sold
Sockeye		
Chinook		
Pink		
Chum		
Coho		
Total		

Bycatch

	Caught	Sold
Total		

Comments:

Figure 2.—Chignik Lagoon test fishery data form.

**APPENDIX A. STATE OF ALASKA SHORT-TERM VESSEL
CHARTER AGREEMENT**

Appendix A1.–State of Alaska Short-Term Vessel Charter Agreement.



State of Alaska

Department of Fish and Game

SHORT TERM VESSEL CHARTER AGREEMENT



This agreement shall cover chartering of the vessel described and under the conditions set forth below between the State of Alaska, Department of Fish and Game and:

Name _____ Mailing address _____

Telephone _____ City/State/Zip _____

VESSEL _____ S.S.# or Tax ID _____

Name and/or Number _____ Type & Keel length _____

Equipment & supplies needed provided by the contractor (food, bait, skiff, etc.) _____

Fishing gear provided by contractor _____

Fuel _____ will be _____ will not be provided by the State of Alaska.

PURPOSE OF CHARTER _____

Charter will begin at _____ on _____ and end at _____ on _____.

(Location) (Date) (Location) (Date)

(Agreement cannot exceed fourteen (14) working days. No extension or sequential contract allowed.)

Cost of Charter: \$ _____ (cannot exceed \$30,000)

TERMS AND CONDITIONS

1. The state will have general direction of activities of the vessel, but contractor (if aboard) will be responsible for safe operation of vessel.
2. The contractor will hold the State harmless from any liability caused by loss of vessel or damage caused to or by the vessel, and against any loss, damage, and/or liability occasioned by or arising from, any negligent act on the part of the contractor.
3. The State will provide insurance coverage for the state employees only.
4. The length of the charter shown above is estimated and can be terminated at anytime by the State but cannot exceed fourteen (14) days.
5. Vessel may be required to submit to an inspection by the U.S. Coast Guard (State's option).
6. Upon completion of the contract, Department of Fish and Game representatives will initiate payment processing. A warrant will be mailed to the above address after processing.
7. Special conditions _____

The terms and conditions are understood and agreed to.

/s/ _____ /s/ _____

Department of Fish and Game Representative

Owner or Master of Vessel

INSURANCE INFORMATION

1. Value of hull insurance \$ _____
2. Amount of protection and indemnity insurance \$ _____
3. Name of Insurance Carrier _____
4. Expiration date of policy _____
5. Number of Contractors _____
6. Name(s) of Department of Fish and Game personnel aboard: _____